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SPECIFICATION

GAS CONCENTRATION MEASUREMENT INSTRUMENT AND GAS CONCENTRATION MEASUREMENT METHOD

TECHNICAL FIELD

The present invention relates to a gas concentration measurement instrument for measuring change in concentration of gas in a measurement region and a gas concentration measurement method therefor.

BACKGROUND ART

A dielectric relaxation method for measuring the dielectric constant of a substance, an absorption spectrum measurement method for measuring the absorption distribution of an electromagnetic wave, and an ultrasonic propagating wave attenuation measurement method for measuring the amplitude damping factor of a passed ultrasonic wave can be used as a method for measuring gas concentration change and gas flow rate. Each of these methods does not have high time resolution.

On the other hand, a propagation time difference method for measuring the time of propagation of an acoustic wave from a transmitter to a receiver is a simple method, enabling the improvement of the time resolution. In this method, the transmitter transmits a standing wave such as a sine wave, the receiver receives the transmitted wave, the standing wave of the transmitter (transmitted wave) is compared with the signal from the receiver (received wave), a propagation time of the peak shift (phase

Entered
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